

ABSTRACT

A power supply for applying a voltage to a scanning electromagnet for deflecting a charged particle beam has a first power supply unit having no filter and a second power supply unit having a filter. When an irradiation position of the charged particle beam in an irradiation object is moved, the first power supply unit, namely a power supply unit having no filter, is used to apply the voltage to the scanning electromagnet, so that an exciting current flowing in the scanning electromagnet can be changed in a short time. Further, when the irradiation position of the charged particle beam is maintained, the second power supply is used to apply a voltage whose pulsating component was removed to the scanning electromagnet, so that the exciting current flowing in the scanning electromagnet can be controlled precisely. Consequently, the charged particle beam can be applied uniformly to the irradiation object and an irradiation time of the charged particle beam to the irradiation object can be curtailed.